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July 1, 2008

Ms. Susan M. Hudson, Clerk
Public Service Board
Chittenden Bank Building, 4th Floor
112 State Street
Post Office Drawer 20
Montpelier, VT 05620-2701

Re: Docket No. 7336: Petition of Central Vermont Public Service Corporation ("CVPS") for Approval of an Alternative Regulation Plan Pursuant to 30 V.S.A. § 218d ("Plan"): Lowry errata pages; support for CLF Stipulation

Dear Ms. Hudson:

On June 23, 2008, CVPS filed its rebuttal testimony, including the prefiled testimony and exhibits of CVPS witness Mark N. Lowry. By electronic mail June 26, 2008, I notified the Board and the parties of a substantive error in Mr. Lowry's testimony, and advised that we would be filing errata pages to make that change and other minor changes. In accordance therewith, enclosed please find the following pages reflecting corrections to Mr. Lowry's prefiled testimony and CVPS Exhibit MNL-2:

Lowry prefiled testimony pages 4, 7, 14 and 19;
CVPS Exhibit MNL-2 pages 7, 13, 18, 19 and 27.

These pages replace in their entirety the pages filed on June 23, 2008.

On or about June 13, 2008, CVPS filed the Stipulation it had reached with the Conservation Law Foundation ("CLF"). In order to provide an explanation of the context within which the Stipulation advances the goals of the Plan and 30 V.S.A. § 218d, CVPS has drafted supporting information it intends to include in its Brief and/or a Proposal for Decision. I am providing with this letter a copy of that supporting information in advance of the hearings, so the Board and parties are aware of the context for the Stipulation and the reasons CVPS and CLF believe the Stipulation supports the Plan and 30 V.S.A. § 218d. CVPS would be pleased to provide any further information the Board requests, and Mr. Deehan and Ms. Levine will be attending the hearings and could provide more information at that time.

Thank you, and should you have questions concerning this filing, please do not hesitate to contact me.

Sincerely,

Kenneth C. Picton
KCP/k
c: Parties

changes and (2) any unusual base rate changes occasioned by known and measurable and used and useful net plant and other rate base additions. The base level of non power cost would escalate by about 2.03% annually in 2009 and 2010. Allowances for an uptick in capital spending would increase the escalation in the cap to an average of 2.56% in these two years.

I comment in this testimony on the reasonableness of the cap proposed by the DPS and offer alternative approaches to capping non-power cost should the Board choose to pursue that approach. My testimony will also review the CVPS Subcap from the same perspectives that I critique the DPS proposal's consistency with index theory and empirical results specific to CVPS.

APPRAISAL OF THE DPS PRPOSAL

Q. Please summarize your conclusions on the DPS proposal as described by Mr. Behrns.

A. The DPS proposal for a Non Power Cost Cap is conceptually flawed, unsupported by solid evidence, and should not be approved. My objections to the proposal encompass four areas: (1) the starting base for the cap, (2) the productivity target, (3) the choice of an inflation measure, and (4) the lack of an output adjustment.

Design of Revenue Adjustment Mechanisms

Q. Before you discuss your ~~six~~ four objections to the DPS proposal, please begin by enunciating some principles for the design of revenue adjustment mechanisms.

A. A revenue adjustment mechanism makes automatic adjustments to a utility's revenue requirement or some component thereof. It is desirable for the mechanism to reflect changes in input prices and other business conditions that affect cost but are beyond the utility's control.

Hybrid		
Pacific Gas & Electric	20-Dec-89	Gas & electric base rate O&M expenses
		Gas & electric base rate small plant additions[2]
Pacific Gas & Electric	16-Dec-92	Gas & electric base rate O&M expenses
		Gas & electric base rate all plant additions
San Diego Gas & Electric	3-Aug-94	Electric base rate O&M expenses
		Electric base rate small plant additions[2]
		Gas base rate O&M expenses
		Gas base rate small plant additions[2]
Southern California Edison	16-Jul-04	Electric base rate O&M expenses
		Electric base rate small plant additions[2]

[1]Settlement outcome

[2]Budgets for large plant additions established in separate proceedings

Note first that in 1999, the Ontario Energy Board approved a mechanism for escalating the allowed O&M expenses of Consumers Gas (dba Enbridge Gas Distribution), which serves Toronto. The formula was CPI – X + growth Output. Cost research revealed ~~The Board chose~~ the number of customers served as the output measure most relevant to the cost of gas distribution.

When the number of customers is the output measure, revenue growth can be capped equivalently by the following general formula,

Growth Revenue/Customer = Inflation – X,

provided that the revenue requirement is also updated to reflect the *current* number of customers.

Q. Are there precedents for this kind of revenue per customer indexing?

A. Yes. This is effectively the approach that the Public Service Board approved for the operating expenses in the ARP of VGS. This approach has also been used to escalate the

Q. Are there precedents that we can look to for guidance in choosing a productivity target for CVPS?

A. Yes. The average productivity target approved by regulators for energy utilities around the world in ARPs that we have gathered is a little less than 1%. In 2006, the Board approved a productivity factor of 0.39% for the cap on the base rate operating expenses of Vermont Gas Systems.

Q. Assuming that appropriate adjustments can be made to the base non power revenue requirement of CVPS, what does your research suggest is the right productivity target for the corresponding revenue escalation formula in the next three years?

A. In original work for this proceeding, PEG has calculated the recent long run growth trends in the productivity of power distributor base rate inputs for CVPS and samples of Northeast and U.S. power distributors. The operations covered comprise power distribution, customer care, and each company's administrative and general services and general plant costs. The sample period for this research was 1996-2006. Details of our index research are found in Exhibit CVPS-Rebuttal-MNL-2. We found that the productivity of the sampled Northeast distributors averaged ~~0.76%~~ 0.74% annual growth. The 0.91% average annual growth in the productivity of CVPS was a little above this and virtually the same as the 1.03% average annual growth in the productivity of the full U.S. sample.

Q. Which of these productivity trend measures do you propose for CVPS?

A. I propose the productivity trend of the Northeast sample.

Q. Earlier you mentioned that you had a concern about annual cost filings during the ARP period. Could you please explain your concerns?

customer growth of around 1% annually. A failure to add a customer growth term to its revenue escalation formula would potentially short the company by around 100 basis points each year. This can be added to the ~~typical 100 basis point~~ burden from ~~the~~ any failure to adjust rates for input price inflation.

Q. What of the DPS emphasis on the need for ARPs in Vermont to be consistent?

A. While consistency has some merits, Vermont has not been in the energy ARP "business" long enough that it has nothing to learn from revenue adjustment mechanisms in other jurisdictions. The failure to include a customer growth term in a revenue adjustment mechanism for CVPS would, in any event, be inconsistent with the mechanism approved for VGS. In my view, the VGS revenue escalation formula is more consistent with index logic and the accumulating precedents and is more worthy of emulation in this proceeding.

Recommendations

Q. Assuming that the Board chooses to adopt a non power cost cap for CVPS and makes suitable changes to the base cost using one of the methods you have mentioned, please summarize your views of an appropriate escalation formula for CVPS.

A. ~~The cost that is subject to the cap should exclude the Company's VELCO earnings~~. The base revenue requirement should be adjusted from the MOU level to reflect input price and output growth through 2008 and an updated list of known and measurable changes in O&M expenses. The base should then be escalated by an index that properly reflects the net effects of input price, productivity, and output growth. This can be done through a mechanism with the general formula

Growth Revenue per Customer = Inflation – X.

and on the pace of its output growth. Incremental scale economies will typically be greater the more rapid is output growth.

A third important source of productivity growth is change in X inefficiency. X inefficiency is the degree to which individual companies operate at the maximum efficiency that technology allows. Usage of capital, labor, and materials and services all matter. Productivity will grow (decline) to the extent that X inefficiency diminishes (increases). The potential of a company for productivity growth from this source is greater the greater is its current level of operating inefficiency. Evidence on operating efficiency can be produced using statistical benchmarking.

An important source of productivity growth in the shorter run is the degree of capacity utilization. Producers in most industries find it uneconomical to adjust production capacity to short-run demand fluctuations. The capacity utilization rates of industries therefore fluctuate. Productivity grows (declines) when capacity utilization rises (falls) because output is apt to change much more rapidly than capacity.

Another short-run determinant of productivity growth is the intertemporal pattern of expenditures that must be made periodically but need not be made every year. Expenditures of this kind include those for replacement investment and maintenance. A surge in such expenditures can slow productivity growth and even result in a productivity decline. Uneven spending is one of the reasons why the productivity growth of individual utilities is often more volatile than the productivity growth of the corresponding industry.

A sixth important source of productivity growth is changes in the miscellaneous other external business conditions that affect cost. A good example for a combined gas and electric utility is the number of gas customers served. Economies of scope are possible from the joint provision of gas and electric service. Growth in the number of ~~electric~~ gas customers served can, by reducing the cost of ~~gas~~ Power distribution, boost productivity growth.

On the other hand, the use of a macroeconomic measure involves its own ~~PCI~~ design challenges. When a macroeconomic inflation measure is used, the ~~PCI~~ must be calibrated in a special way if it is to track the industry ~~unit~~ cost trend. Suppose, for example, that the inflation measure is a CPI. In that event we can restate relation [~~5~~ 6] as revenue escalation formula

growth Revenue/customer =

growth CPI – [trend Productivity +(trend CPI – trend Input Prices)] [7]

The term in parentheses may be called an "inflation differential". It follows that a revenue adjustment mechanism can still conform to index logic when CPI is the inflation measure provided that the X factor is calibrated to reflect any tendency of the CPI to grow more rapidly or more slowly than an industry specific price index.

2.2.4 Relevant Region

The index theory discussed in Part 2.2.1 requires a definition of the industry. A variety of regional definitions may be reasonably considered. In choosing among these we are guided by the following principles. First, the region should be broad enough that the productivity trend of its industry is substantially insensitive to the actions of subject utilities. This may be called the externality criterion. It is desirable, secondly, for the region to be broad enough that the productivity trend is not dominated by the actions of any two or three utilities. This may be called the size criterion.

A third criterion is that the region should be one in which external business conditions that influence input price and productivity growth are similar to those of utilities that may be subject to the indexing plan. This may be called the no windfalls criterion. Similarity in input prices is especially important in reducing expected windfalls. For this reason, PEG frequently uses regional rather than national data samples in research supporting rate and revenue adjustment mechanisms where this doesn't violate the size and externality criteria.

3.3.4 Revenue Requirement Indexes

Non-Power Cost

Our research provides the foundation for a revenue requirement mechanism for the non-power cost of CVPS.[7] The most accurate index would have the following form:

$$growth\ Revenue^{CVPS}$$
$$= growth\ Input\ Prices^{Northeast} - trend\ Productivity^{Northeast} + growth\ Customers^{CVPS}.$$

This can be expressed, equivalently, as

$$growth\ Revenue^{CVPS}/Customer^{CVPS}$$
$$= growth\ Input\ Prices^{Northeast} - trend\ Productivity^{Northeast}.$$

For the productivity target, we propose the 0.74% annual productivity growth rate of the Northeast.

If, alternatively, a macroeconomic index such as the CPI^U is used as the inflation measure, the formula becomes

$$growth\ Revenue^{CVPS}/Customer^{CVPS}$$
$$= growth\ CPI^U$$
$$- [trend\ Productivity^{Northeast} + (trend\ Input\ Prices^{Northeast} - trend\ CPI^U)].$$

In these calculations, we again recommend a 0.74% productivity growth target. For the input price differential, we recommend the difference between the input price trends of the Northeast and the CPI^U from 1996-2006. The value of X is then 0.74 + (2.51-3.07) = 0.18. This escalation formula would have yielded 3.62% average annual revenue growth during the 2001-2006 period and 4.01% growth over the more recent 2003-2006 period. This is a considerably more rapid pace of escalation than the 2.03% growth in the revenue adjustment mechanism that Behrns proposes.

[7] Additional acceleration may be added to fund the envisioned capital spending uptick.

Subcap Escalator

CVPS witness Deehan proposed that subcap costs be escalated annually by the growth in the national CPI for services. This is consistent with the principles we have enunciated concerning the design of revenue adjustment mechanisms. Customer care and A&G costs are the most labor intensive parts of a ~~customer~~ distributor's business. Labor prices tend to rise more rapidly than the CPI. The CPI will thus tend to undercompensate CVPS for growth in the prices of subcap inputs. Over the 1996-2006 sample period we noted above that the prices of subcap inputs averaged 3.08% growth, while the CPI for services averaged 3.19% growth. The inflation differential resulting between the trends in CPI for services and Subcap input prices was thus 3.19 – 3.08 = 0.11. Given CVPS customer growth of about 1%, using the CPI for Services to escalate the Subcap thus implies a productivity target of 1 – 0.11 = 0.89. This is a little above the calculated productivity trend of the Northeast. The subcap costs are thus clearly a candidate for an "inflation only" revenue adjustment mechanism.

of the electric, gas, and sanitary sector of the U.S. economy plus the difference between the growth rates of ECIs for workers in the relevant region and in the nation as a whole.

This general approach to measuring an input quantity trend, which is also used for the quantity of other O&M inputs, relies on the theoretical result that the growth rate in the cost of any class of input *j* is the sum of the growth rates in appropriate input price and quantity indexes for that input class. In that event,

$$growth\ Input\ Quantities_j = growth\ Cost_j - growth\ Input\ Prices_j. \quad [A9]$$

The quantity subindex for other O&M inputs was the ratio of the expenses for these inputs to the GDPPI. The trend in the subindex is then the difference between the trends in the expenses and the GDPPI. Recall from Part A.2.2 that the GDPPI was selected as a proxy for an index of the price trend of inputs in this particular input group.

A.3.3 Input Quantity Subindex Trends

Table A-3 presents additional information on the input quantity trends of CVPS and Northeast and US power distributors over the sample period. For the Northeast, it can be seen that the quantity of labor fell at a 1.21% average annual pace, whereas growth in the use of other O&M inputs averaged 1.63% annual growth. The quantity of distribution plant fell gradually, averaging a 0.15% annual decline. The quantity of general plant rose gradually. Patterns for CVPS were different chiefly in that the capital quantity fell more markedly and the labor quantity rose at about the pace of customer growth. This pattern reflects the aging of the Company's capital stock.

A.4 Relevant Region

2.2.4

Some criteria were noted in Section ~~II.C~~ that are useful for choosing a group of companies to use in input price and productivity indexing. A group of companies is needed that is large enough that the TFP trends of the group are not very sensitive to the trends of CVPS or other individual companies. A group characterized by similarity in the external pressures for unit cost growth that CVPS faces is also desirable.

With these goals in mind we calculated input price and productivity trends for a Northeast aggregate in addition to the trends in the full U.S. sample aggregate. Within

INFORMATION IN SUPPORT OF CVPS-CLF STIPULATION

1. The CVPS-CLF Stipulation.

On June 12, 2008, CVPS and CLF entered into a stipulation that resolved CLF's issues regarding the approval of the Company's Alternative Regulation Plan (the "CLF Stipulation"). In principal part, the agreements contained in the CLF Stipulation are designed to further the 30 V.S.A. § 218d objectives of: (1) providing least-cost energy service to customers; (2) implementing innovations that advance state energy policy that call for increased reliance on Vermont-based renewable energy; and (3) promoting improved quality of service, reliability, and service choices for Company customers.

2. The CLF Stipulation advances Central Vermont's delivery of least-cost energy service to its customers.

If approved, the CLF Stipulation commits the Company to:

(i) work with the Energy Efficiency Utility ("EEU") and the DPS to develop and implement an EEU program to promote the installation of societally cost-effective measures including: solar water heaters, combined heat and power projects and other technology to meet niche market needs including cost-effective heat pumps (that do not incorporate electric resistance heat back up, including electric resistance heat for defrosting coils);

(ii) recommend that a portion of its 2008 NEIL credit and its 2007 ANI amounts related to Vermont Yankee be devoted to funding a collaborative process with CLF, REV and other interested parties promptly to identify barriers to the development of CHP in targeted areas of CVPS's service territory (including review of company-wide policies and practices that may create barriers); and

(iii) fully implement Automated Metering Infrastructure ("AMI") as fast as it reasonably can under a timetable to be approved by the Board that includes agreements to introduce demand/load response programs for residential, C&I and Industrial customers, and cost-justified dynamic pricing where appropriate and consistent with the Company's rate design plan filed under Docket No. 7095.

INFORMATION IN SUPPORT OF CVPS-CLF STIPULATION

When taken together these initiatives are designed to further least-cost planning objectives by helping customer to efficiently use and deploy resources that are shown to be cost-effective using societal cost testing principles that take into account economic and environmental considerations and risks.

3. The CLF Stipulation promotes innovations that advance state energy policy that call for increased reliance on Vermont-based renewable energy.

As discussed in the prefiled Direct Testimony Bill Deehan, the implementation of the Company's ARP as proposed helps to advance consumer adoption of net-metering installations because the Plan contains provisions to decouple utility earnings from customer loads. Similarly that testimony explains that the Plan contains terms to permit the adjustment of power costs to allow the Company to include purchases from new sources facilitating power purchases from new renewable resources including SPEED projects. The implementation of the CLF Stipulation would build on the terms of the ARP by approving a Company commitment to:

(i) offer to purchase power from any new SPEED project; and

(ii) work with interested stakeholders to develop a mechanism to help customers obtain third-party financing for the installation of new on-premises renewable generation and overcome barriers to the introduction of such resources.

These commitments were designed to further the Vermont policies that call on utilities to increase reliance on new renewable resources to help meet customer electrical end uses.

4. The CLF Stipulation promotes improved quality of service, reliability, and service choices for the Company's customers.

INFORMATION IN SUPPORT OF CVPS-CLF STIPULATION

If approved, as noted, the CLF Stipulation would commit the Company to implement AMI as fast as it reasonably can under a timetable to be approved by the Board. The introduction of AMI holds the promise that the Company will be able to utilize this technology to develop innovative service offerings including automated outage reporting, demand/load response programs and cost-justified dynamic pricing. Such offerings will expand the service choices for customers and help the Company to better manage its system to improve service quality. As a result, the Company concludes that this key element of the CLF Stipulation furthers recognized public policy goals as contemplated under Section 218d.

5. The implementation of the CLF Stipulation will not require the Company to incur substantial incremental administrative costs or expenses.

CVPS worked with CLF to develop settlement proposals that the Company believed could be implemented without the incurrence of substantial incremental costs. As the Company has previously explained, it plans to implement AMI and the goal of the CLF Settlement is to develop a faster-track to permit the introduction of this innovative sooner – a technology that offers efficiency gains and the opportunity to lower operating expenses. Similarly, the Stipulation terms that are focused on encouraging new renewable resources limit the Company's involvement to a scope of service that it foresees can be accomplished with reasonable and cost-efficient effort. As a result, the Company is able to recommend the approval of the CLF Stipulation without significant reservation that the settlement will unduly burden the Company or induce unwarranted rate pressures for consumers.

INFORMATION IN SUPPORT OF CVPS-CLF STIPULATION

6. The CLF Stipulation commits the Company to take action to help change the course of its activities, and to help customers and other pursue initiatives that further important state energy goals.

The Company is prepared to move forward with the commitments contemplated under the CLF Stipulation and to take reasonable steps to advance the policy goals as contemplated there under. However, the Stipulation does not commit the Company to assure results. In large measure, the success of the CLF Stipulation will be determined if consensus can be achieved with the many other stakeholders, including customers, that will also need to take action to bring new projects and new ways of serving customers to life. The Company believes these efforts are worth pursuing and that there is a reasonable chance that the implementation of the CLF Stipulation will be a catalyst for progress.